

deserves notice, though, for reasons which need not now be discussed, it has never come into practical use among astronomers.

The celebrated cup anemometers, now so extensively used, are an indication of the practical skill and ingenuity by which Dr. Robinson was distinguished. The very latest scientific labour of his long life was a redetermination of the constants of the cup anemometer. This was accomplished by experiments on a very large scale, in the dome of Mr. Grubb's workshops, at Dublin. The results of these labours have been published in the *Phil. Trans.*, 1878-1880.

Considering that Dr. Robinson was an author before the battle of Trafalgar, that he was elected a Fellow of Trinity College, Dublin, before the battle of Waterloo, and that he was made Director of the Armagh Observatory within a year or two of the death of Sir W. Herschel, it is not surprising to find that his scientific friends and associates belonged mainly to the past generation. In that past generation, Dr. Robinson occupied a distinguished and remarkable position. He was intimately associated with the late Earl of Rosse in all those memorable experiments which culminated in the great Reflector at Parsonstown. He was the friend of Sir James South, of Sir William Fairbairn, and of many other celebrities. His wide sympathy, his gentle and invariable kindness, his wondrous stores of knowledge, his charming powers of conversation, his brilliant eloquence, were qualities universally recognised, and caused him to be welcomed and beloved in many circles besides those purely scientific.

He was elected a Fellow of the Society on May 14, 1830.

R. S. B.

CHARLES VINCENT WALKER died at his residence at Tunbridge Wells, on the morning of December 24, 1882, in the seventy-first year of his age. He had been Telegraph Engineer to the South Eastern Railway since 1845, and was one of the oldest telegraph engineers in the country. He was a zealous worker in the science of electricity, and was the inventor of several useful appliances in connection with telegraphy, including the instruments by which the block system on railways is worked. His name is especially associated with the origin of the distribution of time by telegraph. On May 10, 1849, Mr. Glaisher wrote to Mr. Walker that he wished to talk with the latter about the laying down of a wire from the Observatory to the Lewisham Station, and on May 23 following, the Astronomer Royal gave Mr. Walker a brief sketch of the use to be made of the wire referred to, his scheme, as he stated, being "the transmission of time by galvanic signal to every part of the kingdom in which there is a galvanic telegraph from London." It was proposed to lay four wires underground from the Royal Observatory to the railway station at Lewisham, and to extend them to London Bridge. The South Eastern Railway Company gave every

facility. On September 16, 1852, an electric clock at London Bridge Station was erected, and connected by wire with an electric clock at the Royal Observatory, Greenwich. The first time-signal sent from the Royal Observatory was received at London Bridge Station at 4 p.m. on August 5, 1852; and on August 9, 1852, Dover received a time-signal for the first time from the Royal Observatory direct, and it was made visible at certain first-class stations between London and Dover. After that the system rapidly spread, its success depending greatly on the scientific skill and zeal of Mr. Walker.

He was elected a Fellow of the Royal Society in 1855, and he was a late President of the Meteorological Society, and of the Society of Telegraph Engineers. He was elected a Fellow of the Society on January 8, 1858.

EMILE PLANTAMOUR.—In the Annual Report of last year the death of Gautier was announced, and now we have to record the death of his pupil and successor as Professor of Astronomy and Director of the University at Geneva, which occurred on September 7, 1882. Plantamour was born at Geneva in 1815. He received his early education in the old college, founded by Calvin, after which he spent eight years in the then celebrated school of Hofroy. In 1833 he entered the Geneva Academy, where he became one of Gautier's most promising pupils. After graduating in philosophy, he resolved to make the study of astronomy the work of his life, a design in which he was encouraged by Gautier, who promised to vacate his chair in Plantamour's favour when the latter had completed his university education. The chief reason—an affection of the sight—which caused Gautier to desire to retire from the direction of the Observatory was referred to in the obituary notice of Gautier. From Geneva Plantamour proceeded to Paris, where he studied for two years under Arago. He also was a pupil of Bessel at Königsberg, where, in 1839, he took the degree of doctor, the subject of his thesis being the methods of calculating the orbits of comets. From Königsberg he went to Berlin, and worked for some time with Encke, who recognised in his quickness of observation and aptitude for complex calculations his special fitness for the career to which he intended to devote himself. On his return to Geneva Plantamour received the double appointments of the professorship of Astronomy in the Academy, which has since been transformed into a University, and director of the Observatory. In 1848 he accepted also the chair of Physical Geography, and he retained all three positions until his health began to fail him a few months before his death. His publications chiefly related to atmospheric electricity, observations of comets, and meteorological observations made on the Great St. Bernard. Special reference should be made to the important investigations of the diurnal oscillations of the soil undertaken by him by means of spirit levels, and of which accounts are given in the *Comptes Rendus* for 1878